

## 6 Overview of Assessment Process

### 6.1 Introduction

6.1.1 This chapter outlines the general approach followed for the EIA of the proposed scheme in accordance with DMRB and other relevant guidance. More detailed methodologies are provided in the respective chapters.

6.1.2 The aims of the EIA are to:

- gather information about the environment of the study area and identify environmental constraints and opportunities associated with the area which may influence, or be affected by the proposed scheme;
- identify and assess potential environmental effects; and
- identify and incorporate into scheme design and operation, features and measures to avoid, reduce or offset adverse impacts, or in some cases to enhance beneficial impacts.

### 6.2 Scope and Guidance

#### Trunk Road EIA

6.2.1 The term ‘trunk road’ in Scotland refers to the strategic system of major roads and associated structures (including bridges) for which the Scottish Ministers have responsibility. The proposed scheme would form part of the trunk road network.

6.2.2 Annex E of Circular 8/2007 ‘The Environmental Impact Assessment (Scotland) Regulations 1999’ (Scottish Government, 2007) provides guidance on EIAs of trunk road projects. Although the Environmental Impact Assessment (Scotland) Regulations 2011 consolidated, updated and replaced Part II of the Environmental Impact Assessment (Scotland) Regulations 1999, Parts III and IV of the 1999 Regulations concerning Roads, Bridges and Land Drainage, remain extant. Consequently, the guidance contained in Circular 8/2007 in Annex E continues to apply and is relevant to the proposed scheme.

#### Design Manual for Roads and Bridges (DMRB)

6.2.3 The DMRB sets out governmental guidance on the development of trunk road schemes, including motorways, and is applicable to the proposed scheme. Volume 11 of DMRB specifically provides guidance on EIA, including the level of assessment at key stages of development and reporting of environmental impacts.

6.2.4 DMRB considers three levels of assessment, comprising of Stage 1, Stage 2 and Stage 3. The objectives of each stage are identified in Table 6.1.

**Table 6.1: DMRB Stages of EIA**

Stage	Objectives
Stage 1	Identification of environmental advantages, disadvantages and constraints associated with broadly defined route corridors.
Stage 2	Identification of the factors and effects to be taken into account in the selection of route corridor options and in the identification of the environmental advantages, disadvantages and constraints associated with these route corridors.
Stage 3	Assessment to be undertaken in accordance with Environmental Impact Assessment (Scotland) Regulations 1999 which implements EC Directive 85/337, with publication of an Environmental Statement or Environmental Assessment Report.

6.2.5 It should be noted that some DMRB guidance updates no longer refer specifically to assessment stages as listed above in Table 6.1, such as HA213/11: Noise and Vibration (Highways Agency *et al.* 2011), which refers to ‘simple’ and ‘detailed’ assessment. However, while following DMRB guidance, for the purposes of consistency and clarity, this ES refers to ‘DMRB Stage 3 assessment throughout.

6.2.6 As set out in Chapter 3 (Alternatives Considered), mainline route options and grade separated junction variants were identified and considered in 2015-2016 according to environmental advantages, disadvantages as part of DMRB Stage 2 environmental assessments. This ES presents the findings of the DMRB Stage 3 environmental assessment.

**Scope of Environmental Assessment**

6.2.7 Consultation for the proposed scheme has been undertaken in line with Transport Scotland’s guide: ‘A9 Dualling Programme Engaging with Communities’ (2013 and 2016 update), and guidance provided in Planning Advice Note (PAN) 1/2013: Environmental Impact Assessment (Scottish Government, 2013). Cognisance has also been taken of PAN 81: Community Engagement (Scottish Executive, 2007). Chapter 7 (Consultation and Scoping) describes the consultation process.

6.2.8 In accordance with DMRB Volume 11, assessment has been undertaken of the environmental parameters presented in Table 6.2 and reported in chapters 8 to 20. This environmental topic structure takes into account guidance provided in Appendix D of Interim Advice Note (IAN) 125/15: Environmental Assessment Update (Highways England, 2015). This guidance note was issued in October 2015 and replaces the previous IAN125/09 Supplementary Guidance for users of DMRB Volume 11 Environmental Assessment (Highways Agency et al, 2009). As set out in the A9 Dualling Perth to Inverness EIA Scoping Report (Transport Scotland, 2016) issued to statutory consultees, a separate plans and policies chapter is provided within this ES (Chapter 19: Policies and Plans). Although IAN 125/15 proposes that relevant policies and plans are considered within technical chapters, it was agreed that this approach was not considered appropriate for the A9 Dualling projects.

**Table 6.2: Environmental parameters assessed in chapters 8 to 20**

ES Chapter	Environmental Parameter/Title	Comments
8	People and Communities – Community and Private Assets	Combines DMRB Volume 11 topics ‘land use’ and ‘community effects’ as proposed in IAN125/09. However, due to volume of data the ‘People and Communities’ guidance as listed in IAN125/15, the findings are reported in two chapters; Community and Private Assets and Effects on All Travellers (Chapters 8 and 9).
9	People and Communities – Effects on all Travellers	Combines DMRB Volume 11 topics ‘pedestrians, cyclists and equestrians’ and ‘vehicle travellers’, as proposed by IAN125/09. As noted above, this chapter presents the second part of the IAN 125/09 ‘People and Communities’ guidance.
10	Geology, Soils, Contaminated Land and Groundwater	Inclusion of this topic takes cognisance of DMRB HD45/09 - Road Drainage and the Water Environment (RDWE).
11	Road Drainage and the Water Environment	Inclusion of this topic takes cognisance of DMRB HD45/09.
12	Ecology and Nature Conservation	Inclusion of this topic takes cognisance of DMRB Volume 11 topic ‘Ecology and Nature Conservation’ and IAN 130/10 – Ecology and Nature Conservation: Criteria for Impact Assessment.
13	Landscape	Inclusion of this topic takes cognisance of DMRB Volume 11 topic ‘Landscape Effects’ and DMRB IAN 135/10 – Landscape and Visual Effects Assessment.
14	Visual	Inclusion of this topic takes cognisance of IAN 135/10.
15	Cultural Heritage	Inclusion of this topic takes cognisance of DMRB HA208/07 – Cultural Heritage. The assessment also takes note of the ‘Managing Change in the Historic Environment’ guidance prepared by HES.
16	Air Quality	Inclusion of this topic takes cognisance of DMRB HA207/07 – Air Quality.
17	Noise and Vibration	Inclusion of this topic takes cognisance of DMRB HD213/11 – Noise and Vibration.
18	Materials	Inclusion of this topic takes cognisance of DMRB HD212/11 - Materials.
19	Policies and Plans	A separate ‘Policies and Plans’ chapter is provided. This approach was agreed in the environmental scoping report which sets out that the approach in IAN125/15 to consider relevant policies and plans within technical chapters was not considered appropriate for the A9 Dualling projects.
20	Cumulative Impacts	Inclusion of this topic takes cognisance of DMRB HA205/08 – Assessment and Management of Environmental Effects, and DMRB HA218/08 – Glossary of terms Used in DMRB Volume 11, Sections 1 and 2.

- 6.2.9 Further to the structure of the assessment, IAN125/15 provides guidance on the approach to the environmental assessment in line with the requirements of the updated EIA Directive (Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment) (European Union, 2014). Although the guidance provided in IAN125/15 has been specifically developed for Highways England (previous Highways Agency), this ES has been produced with cognisance of IAN125/15, in discussion with Transport Scotland, with particular reference to achieving an effective and efficient environmental assessment.
- 6.2.10 Details of the scope of assessment within these environmental parameters are provided within each ES chapter.

### **Study Area**

- 6.2.11 The study area required or recommended by DMRB and best practice guidance varies depending on the specific environmental parameter being assessed. The study area is therefore defined separately within each assessment chapter according to topic guidance, the geographic scope of potential impacts or the geographic scope of the information required to assess those impacts and the associated likely significant effects.

## **6.3 Environmental Reporting**

### **Chapter Structure**

- 6.3.1 Chapters 8 to 18, as listed in Table 6.2, provide the following:
- an introduction to the subject area;
  - approach and methods used in the assessment;
  - baseline conditions (i.e. the 'existing' situation or for certain assessments the anticipated future situation in the absence of the proposed scheme);
  - potential impacts of the proposed scheme;
  - mitigation for the proposed scheme;
  - residual impacts of the proposed scheme (taking account of proposed mitigation); and
  - references.
- 6.3.2 Chapter 19 (Policies and Plans) and Chapter 20 (Cumulative Impacts) have a slightly modified structure appropriate to the topic area. Chapter 21 (Schedule of Environmental Commitments) and Chapter 22 (Summary of Significant Residual Impacts) are presented in tabular format.

### **General Approach**

#### Baseline Conditions

- 6.3.3 This EIA considers likely impacts of the proposed scheme on each environmental parameter in comparison to baseline conditions, which were determined through field survey, desk-based review and consultation. Baseline conditions describe the environmental conditions at the site (and in the wider area as pertinent to the particular environmental parameter) in the absence of the proposed scheme (i.e. the 'Do-Minimum' scenario).
- 6.3.4 For assessments of potential impacts based on traffic data (such as drainage, water quality, air quality, noise and vibration), the assessment takes into account predicted changes in traffic flows in future years for the proposed scheme, and also considers the likely additional traffic generation as a result of the full A9 from Perth to Inverness being upgraded to dual carriageway as part of the wider programming for A9 dualling. Traffic volumes for the Do-Minimum scenario and the proposed scheme were derived from the traffic model as explained in Section 5.4 of Chapter 5 (The Proposed Scheme).

Potential Impacts

- 6.3.5 The general approach to assessment is based on the determination of the significance of an impact from a combination of the sensitivity or importance of the baseline conditions (i.e. the current site and its environs, including the sensitivity of receptors) and the magnitude of potential temporary and permanent impacts. This process is described in the respective environmental chapters, and where alternative approaches were considered more appropriate these are described and justified; such as consideration of ecological impacts taking account of Institute of Ecology and Environmental Management (IEEM) guidance in Chapter 12 (Ecology and Nature Conservation).
- 6.3.6 It should be noted that the magnitude and significance reported within the ‘Potential Impacts’ section of each chapter are on the basis of no mitigation.
- 6.3.7 Chapters 8 to 20 describe and assess the envisaged effects of the proposed scheme during both its construction and operation (i.e. following proposed scheme opening).

Mitigation

- 6.3.8 PAN 1/2013: Environmental Impact Assessment (Scottish Government, 2013) presents mitigation as a hierarchy of measures ranging from prevention of environmental impacts by avoidance, to measures to offset any impacts that cannot be remedied. The mitigation hierarchy is summarised in Table 6.3.

**Table 6.3: Mitigation Hierarchy**

Level of Mitigation	Definition
Prevent	To prevent adverse environmental impacts at source (e.g. building design or specification of construction equipment).
Reduce	If adverse impacts cannot be prevented, steps taken to secure a reduction of impacts (e.g. minimisation of the cause of the impact at source, abatement on site and abatement at receptor).
Remedy/offset	When impacts remain that cannot be prevented or reduced, they should be offset by remedial or compensatory action (e.g. provision of environmental improvements, opportunities for access and informal recreation, creation of alternative habitats and prior excavation of archaeological features).

- 6.3.9 Mitigation takes into account best practice, legislation, guidance and professional experience. The principles and considerations identified in the A9 Dualling SEA (Transport Scotland, 2013) and related strategic work has also been considered.

A set of standard mitigation commitments has been developed across the A9 Dualling Programme which will be implemented on each one of the A9 dualling projects, alongside project specific mitigation measures. Each environmental chapter contains tabulated mitigation measures and these are collated in Chapter 21 (Schedule of Environmental Commitments). Each measure is numbered with a “Mitigation Item number”, which also indicates the environmental discipline proposing the measure e.g. CP1 is the first standard mitigation item in Community and Private Assets. Those measures that are project specific are denoted with the project number e.g. P03-CP17.

- 6.3.10 Where possible and reasonably practicable, potential adverse environmental impacts of the proposed scheme have been prevented through an iterative approach to the design process, rather than relying on measures to mitigate the impacts (e.g. incorporation of access arrangements for vehicles or pedestrians into the design). Further information is provided in Chapter 4 (Iterative Design Development).
- 6.3.11 Where complete prevention of potential impacts was not feasible, measures have been proposed to reduce potentially significant impacts through abatement measures either at source, at the site (e.g. visual screen planting and landscaping), or at the receptor (e.g. design of culverts). The level at which impacts are considered ‘significant’ depends on the environmental parameter assessed, but generally potential impacts of ‘Moderate’ or greater significance would be identified as priorities for mitigation.
- 6.3.12 Where potential adverse impacts cannot be prevented or reduced, consideration has been given to the specification of measures to be included in the Contract Documents that offset or, in certain

circumstances, compensate for any damage. Measures as stipulated in this ES will form contractual requirements on the contractor (or Transport Scotland where applicable).

- 6.3.13 The Strategic Environmental Design Principles (listed in full in Appendix A2.1) and developed as part of the SEA process in the SEA Post Adoption Statement (Transport Scotland, 2014) have been applied within the context of the environmental impact mitigation hierarchy, with the primary approach being to use the flexibility available within early design stages to avoid an adverse impact before considering mechanisms available to reduce, offset or, as a last resort, provide compensation for adverse impacts.

#### Residual Impacts

- 6.3.14 Residual impacts sections within the chapters report the anticipated significance of impacts remaining following application of the proposed mitigation identified in the ES.

#### Summary of Impacts and Mitigation

- 6.3.15 EIA regulations require the consideration of cumulative effects. Chapter 20 (Cumulative Impacts) considers the potential for cumulative effects of the proposed scheme on a single receptor/resource, and also of the proposed scheme along with other reasonably foreseeable developments including, for the purposes of this EIA, all projects in the A9 Dualling Programme.
- 6.3.16 Chapter 21 (Schedule of Environmental Commitments) provides a summary of proposed mitigation as reported in ES Chapters 8 to 18. Chapter 22 (Summary of Significant Residual Impacts) provides a summary of those impacts still considered significant after successful implementation of any proposed mitigation.

#### **Changes to Scheme Design**

- 6.3.17 The assessment of potential impacts and the identification of mitigation measures in the ES are based on the proposed scheme DMRB Stage 3 design as described in Chapter 5 (The Proposed Scheme). As noted in Chapter 1 (Introduction), the design of the proposed scheme may be refined, but will still be deemed to comply with this ES provided that such refinements to this design would be subject to environmental review to ensure that the effects would be no worse than those reported in this ES.

## **6.4 References**

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